The use of synchronous and asynchronous technological tools for socio-constructivist language learning

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ABSTRACT

Language Learning has undergone significant changes in terms of its underlying theoretical foundation and the practical implications of instructional techniques. Although the significant contributions of behavioral and cognitive theorists cannot be overstated, the relatively new constructivist ideology seems to be particularly promising in this field. This paper will examine socio-constructivist theory as it relates to language learning and explore the recent technological advancements which learners and educators can exploit in a sociocultural way to improve the efficiency and effectiveness of language acquisition. The benefits of using synchronous and asynchronous tools, in particular, to facilitate language learning in social and collaborative ways will also be explained in a detailed discussion.

There are several factors which increase the likelihood that a learner will succeed at learning a language. First of all, they should be put in an authentic environment which lets them practice skills that will be used in the real world. They must get sufficient exposure to the language and get quality feedback from peers and more capable or knowledgeable people. This means that in a classroom setting, a low teacher to student ratio is ideal to increase the number of utterances per student. Whyte (2009) pointed out that "research shows that intensive instruction - more hours over a short time frame - is more effective that

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slower-paced instruction, such that 300 hours in one year will lead to greater proficiency gains than the same number of hours taught over three years." Students need dynamic environments to stimulate motivation and must perceive the value of learning the language. If they do not they are more likely to give up. As we will see in the following sections, the use of technology is one effective way to account for the needs of learners.

The past has seen educators attempt many different ideologies when trying to induce language acquisition. First of all, those with a behaviorist or objectivist slant focused on mimicry, repetition, and pattern drills to change the observable behavior of the learner. Learning was thought to come from knowledge outside of the learner and the focus was thus on the teacher's preparation and the transmission of knowledge. Teachers tended to emphasize the grammar-translation technique. This transmission-acquisition model promotes an environment in which teachers, who are considered to be experts in the given field, broadcast facts and procedures to the student. The lessons begin with very basic ideas and became more advanced as the student progresses. The student is then tested after everything has been memorized to the best of their ability. This teacher is in control of all activities, the content, and the language used.

The cognitivist perspective is more pragmatic and deals with the processing of information that is thought to occur inside the learner. Knowledge in the form of sensory input is then processed in short term memory for transmission to the long- term memory with the desire of increasing later recall of the information. Searching for ways to increase the likelihood of vocabulary retention is a typical practice for proponents of this methodology.

As educators began to realize the potential of social interaction in learning, constructivist theorists postulated that humans learn while participating in various activities. This is a kind of experiential knowledge which decreases the importance of the outcome and increases that of the process. Fluency supersedes accuracy. The teacher relinquishes control and students have more freedom in choosing what they want to learn. It makes the lessons more spontaneous and the teacher's role must change so that they guide and motivate students, help groups, and give appropriate feedback.

The socio-cultural/socio-constructivist theory grew out of this ideology and when discussing content-based instruction Vygotsky (1978) said that it gives students "many opportunities to negotiate the knowledge that they are learning (rather than simply interact or exchange information) and to extend their knowledge at increasing level of complexity as more content is incorporated into the lesson... Thus the learners are able to scaffold on their prior knowledge with an expert and move through the zone of proximal development."

2. Vygotsky - Sociocultural Theory and Social Constructivism

The pioneering work of Vygotsky (1978) led to a radical shift in the way that educators examined psychological and environmental learning factors. Vygotsky postulated that learning was a purely social process in which people learn through various forms of activity. It is a form of situated or contextual learning and these social settings are a prerequisite for the development or construction of knowledge. Both internal and external knowledge are interrelated and as members of a community relate to one another, knowledge is passed through the group. This leads to the development of that specific group over time. These implications have influenced many to call it a cultural-historical activity theory (CHAT). Social constructivist theory (SCT) has many important features that are thought to be part of the learning process. At the epicenter of these distinctive attributes lies mediation. Mediation relates to the consciousness and the fact that humans have the capacity to use tools such as language to make rational decisions and react to the biological world around them. The zone of proximal development refers to the extent an individual feels comfortable employing knowledge or skills in a social setting. With sufficient

feedback, this individual will rely less and less on the peers around them for help. Other terms such as internalization, regulation, and imitation were all considered important components of a socially mitigated learning process.

Lave and Wenger (2002) expanded on this theory to describe social learning communities called communities of practice. Knowledge was believed to be a feature of the community which is built upon by members of the group over time. A new member of a group gradually becomes more central with increases in experience and knowledge through the process of legitimate peripheral participation.

3. Second Language Socialization (SLS)

Second Language Socialization (SLS) is a recent development in language learning theory which has a strong connection to SCT. It prioritizes the significance of group dynamics and sees learning as a cultural-historical or socio-historical attribute. Just like the features found in COP, language learners acquire legitimacy and status in a community as their language competence begins to match that of experts within the group. Back (2013) described the perception of meaning making and learning as "processes that are co-constructed in discursive practice".

The implications of this theory can be seen in the way young children tend to examine the language patterns, routines, and speech habits of the people in their surroundings. After some practice in the form of inner speech, these children emulate those verbal acts. Children must learn the appropriate verbal skills required to correctly respond to behavioral cues. More experienced peers provide guided assistance on the appropriateness of the speech and the novices give feedback regarding their educational needs in this social system. Learning is an active process and learners improve though dialog in such a way that the whole group reaps the benefits of individual advancement.

4. Sociocultural Theory and Language Learning

Being that learning a language is entirely based on how well one is able to communicate with others, it seems only natural that the best theoretical groundwork would be communicative in nature. The sociocultural perspective "illuminates the role of social interaction in creating an environment to learn language, learn about language, and learn through language" (Warschauer, 1997).

Vygotsky postulated that we learn through activity. Language is one of the essential tools that humans exploit during activities to gain a better understanding of the world (Vygotsky, 1962; 1978). Through the process of manipulating various tools in important activities such as social collaboration, learners move through to more advanced stages in their zone of proximal development. That is, feedback from peers, instructors and other contextual cues aid the learner to the point that less and less scaffolding is needed to accomplish various tasks. As we interact with others, we notice the words, grammar, expressions, and verbal habits that others are using and based on these observations and help with those around us, we can try them on our own. Activities that required the input from others can then be completed alone. SCT and activity theory, in particular, can be harnessed in a language learning environment to promote positive motivational effects. Learners are directly influenced by contextual factors including their social lives at work, in the classroom, and in other daily activities. Positive feedback from these interactions will improve attitudes about a specific context and inspire learners to try harder to learn the language while negative feedback causes learners to focus on other life goals (Kim, 2011).

Parks and Maguire (1999) were also interested in examining the environmental and sociological cues that language learners rely on when trying to determine the appropriate skills for a particular environment. Nurses who were forced to learn both the language and other more specific job skills used legitimate peripheral participation as they tried to acquire the writing skills needed for proper note-taking. Finding the right people and questions to ask, assimilating this knowledge, and then using it in related

circumstances was of vital importance. As they became more comfortable with the correct nomenclature and expressions needed, they relied less and less on the more experienced peers around them.

According to SCT theory, knowledge is considered a construct that is developed and controlled by the group or community, not the individual. To help learners improve their English writing skills, Muriguiah, and Thang (2010) asked learners to conduct reflective learning in an interactive way with their peers. The process of sharing their thoughts with others and then discussing various related topics helped the learners improve the quality of their responses.

5. Future of Education

Those theories have all proven to be useful for language acquisition but to be completely reliable a learning theory must adequately represent the current time period. We now live in a connected world where new information is constantly being created, obtained, updated, and disposed of at an exponential rate. "Since information is constantly changing, its validity and accuracy may change over time, depending on the discovery of new contributions pertaining to a subject" (Kop, 2008). Education is not just an educational institution phenomenon; it happens in many contexts and at all times and environments so we need to prepare our learners for a future in which different skills will be vital.

Traditional methods may be insufficient for language learners in this digital world. Language in its very nature can be abstract and feature many different answers. There is no real need for experts to decide exactly what learners need to now and then transmit this knowledge in such a passive way. The memorization of long lists of words might be the answer for preparing someone for a scholastic test but to be really proficient in a language, communicative skills should be considered paramount.

Another focus of language learning should be based on not only learning what and how but also where to find the information. It is becoming clearer that it is impossible to know everything, but learners must at least know methods for getting the answers. These digital natives have grown up in a digital world and therefore have been changed by this reliance on technology. They thrive in a virtual world and therefore must be given the opportunity to practice language skills in it. There will be less reliance on face-to-face communication in the future so they will be rewarded by being offered a system of language learning that appreciates the value of online communication.

6. Synchronous and Asynchronous Online Learning

Text-based communicative tools on the internet offer plenty of excellent opportunities for learners to develop their language skills in a social and collaborative way. These tools can be divided into two categories, synchronous and asynchronous, depending on the relative speed of interactivity between the users of the given platform. Synchronous tools, such as online chat, offer the ability to intact very quickly with other individuals whether that be in one-to-to conversation or in a group. They are great for brainstorming activities in groups and tend to promote more conversational and informal writing (Wang, 1993). Asynchronous tools such as discussion boards, on the other hand, are somewhat slower but equally if not more effective for the facilitation of language learning. They allow for in-depth and critical analysis and are better for decision-based tasks (Weisband, 1992).

Warschauer (1997) points out that "social dynamics of computer-mediated discussion have proven to be different than face-to-face discussion in relation to issues such as turn-taking, interruption, balance, equality, consensus, and decision making." A study by McGuire, Kiesler, and Siegel (1987) showed that in face-to-face situations men are five times more likely to propose a solution to a problem whereas in electronic discussions women and men are equally likely to do so. The same effect can be seen for people with differences in status. Online social collaboration in places like discussion groups equals the playing field, allowing lower-status people the opportunity to express their opinions. It appears that a

variety of social cues, gestures, tone, and other factors that may cause us to remain quiet in the physical world are not nearly as powerful in a virtual one.

When language learners are placed in these kinds of text-driven collaborative environments they participate more than in face-to-face conversations and the quality of the language that they use improves as well. (Chun, 1994; Kern, 1995). There is a balance not typically found in face-to-face situations so that there is an equal distribution of speech among participants. The lack of visual cues such as facial expressions and gestures, the possibility of anonymity, and fewer interruptions all prove to be positive characteristics of a text-driven conversation. More complex forms of syntax are explored and fewer grammatical errors are made (Kelm, 1992).

Writing classes in the classroom setting often concentrate on descriptive and narrative forms. However, persuasive, expressive, and other forms are vital in an environment where peers and other viewers are going to evaluate the work such as that found in an online setting. As students make comments about blog entries or respond to an email from someone across the world, they are participating in a truly authentic and meaningful task. This kind of situated learning helps to prepare learners for a future where their language needs will vary depending on the goal at hand. Language skills and strategies that have proven to be useful in the past must be adapted to fit into the new situations.

Fortunately, there is some evidence that practice using text-based computer interactivity can transfer to improved oral proficiency as well (Payne and Whitney, 2002). Receptive skills such as reading, and both expressive skills, writing and speaking, all benefit from these kinds of learning environments.

7. Conclusion and Discussion

Technology has provided an exciting new avenue in which language learners can improve while having an enjoyable time. However, there are still many questions that must be must be answered to make sure that they are getting the best education possible. Is the quality of information online as effective for learning as that made by instructional designers? Does the learning platform offer different modalities to make sure that all learning styles are covered? Exactly what are the roles of teacher and learner? How can learning be enhanced as the learner progresses from a beginner to an expert?

In a socially-driven society, learning the correct language and circumstances in which certain skills can be used is of vital importance. An online program based on socio-constructivist theory that features both asynchronous and synchronous tools can enhance learning. Learners flourish in these kinds of collaborative virtual environments. Educators should guide the learners by providing appropriate scaffolding and feedback whenever necessary. New methods of communication that have arisen due to recent advancements in technology can be used for effective language acquisition.

References

Abdelraheem, A. Y. (2012). Interactions quality in Moodle as perceived by learners and its relation with some variables. Turkish *Online Journal of Distance Education* , 13 (3), 375-389.

Back, M. (2013). "La Orquesta": Symbolic performance in a multilingual community of practice. *Modern Language Journal,* 97(2), 383-396. doi:10.1111/j.15404781.2013.12009.x

Chun, D. M. (1994). Using computer networking to facilitate the acquisition of interactive competence. System , 22 (1), 17-31. Gokool-Ramdoo, S. (2008). Beyond the Theoretical Impasse: Extending the applications of Transactional Distance Education Theory. The *International Review of Research in Open and Distance Learning . 9 (3).* Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/541/1151

Kim, T. (2011). Sociocultural dynamics of ESL learning (de)motivation: An activity theory analysis of two adult Korean immigrants. *C anadian Modern Language Review, 6 7(* 1), 91-122.

Kelm, O. R. (1992). The use of synchronous computer networks in second language instruction: A preliminary report. *F oreign Language Annals* , 25 (5), 441-454.

Kern, R. G. (1995). Restructuring classroom interaction with networked computers: Effects on quantity and characteristics of language production. The *Modern Language Journal, 7 9(* 4), 457-476.

Kop, R., & Hill, A. (2008). Connectivism: *Learning theory of the future or vestige of the past? The International Review of Research in Open and Distance Learning* , 9 (3). Retrieved fromh ttp://www.irrodl.org/index.php/irrodl/article/view/523/1137

Lave, J., & Wenger, E. (2002). Legitimate peripheral participation in communities of practice. *Supporting lifelong learning,* 1, 111-126.

Murugaiah, P., & Thang, S. (2010). Development of interactive and reflective learning among Malaysian online distance learners: An ESL instructor's experience. International *Review Of Research In Open And Distance Learning , 1 1 (3),* 21-41.

Nolan, R. E. (2001). The power of theory in the administration of ESL programs. *Adult Basic Education* , 11 (1), 3-16.

Parks, S., & Maguire, M. H. (1999). Coping with on-the-job writing in ESL: A constructivist- semiotic perspective. Language *Learning, 4 9(* 1), 143-75.

Payne, J. S., & Whitney, P. J. (2002). Developing L2 oral proficiency through synchronous CMC: Output, working memory, and interlanguage development. Calico *Journal,* 20(1), 7-32.

Vygotsky, L. S. (2012). Thought *and language* . MIT press. Vygotsky, L. (1978). Mind in society: The development of higher psychological processes (Ed.

by M. Cole, V. John-Steiner, S. Scribner, & E. Souberman). Cambridge, MA: Harvard University Press.

Warschauer, M. (1997). Computer-mediated collaborative learning: theory and practice. The *Modern Language Journal,* 81(4), 470-481.

Wang, Q. (2009). Designing a web-based constructivist learning environment. Interactive *Learning Environments,* 17(1), 1-13.

Weisband, S. P. (1992). Group discussion and first advocacy effects in computer-mediated and face-to-face decision making groups. Organizational *behavior and human decision processes* , 53 (3), 352-380.

Whyte, S. (2011). Learning theory and technology in university foreign language education The case of French universities. Arts *and Humanities in Higher Education,* 10(2), 213-234.